Furkan M. Küçükdemir

https://ff-k.github.io/

SUMMARY

- Software engineer and PhD student
- Interests: Real-time CG, ray/path tracing, digital geometry processing and deep learning
- Prefers to work on low-level code
- Reverse-engineering hobbyist

EDUCATION

Middle East Technical University — Ankara, Turkey
PhD in Computer Engineering — *Oct. 2020 – Present*

Middle East Technical University — Ankara, Turkey
MSc in Multimedia Informatics; GPA: 3.61 — *Oct. 2017 – Sep. 2020 (Expected)*
Thesis: 3D Indoor Scene Segmentation using Consensus Clustering — *Supervisor: Assoc. Prof. Yusuf Sahillioğlu*

Hacettepe University — Ankara, Turkey
BSc in Computer Engineering; GPA: 3.42 — *Sep. 2013 – June 2017*

EXPERIENCE

Game Systems Engineer, *TaleWorlds Entertainment* — Ankara, Turkey
Dec. 2020 – Present

Senior Software Engineer, *MilSOFT Software Technologies* — Ankara, Turkey
Oct. 2020 – Dec. 2020

Research Intern, *Hacettepe University* — Ankara, Turkey
Aug. 2016 – Sep. 2016

Worked on a research project about discovering the topology of a network of IoT devices with Assoc. Prof. Mehmet Köseoğlu. Implemented a wireless network scanner using *Wireless Tools for Linux* and collected data via Intel Edison boards. Besides, the same application is ported to Android to allow mobile phones to help data collection phase.

Technologies Used: *Android NDK and SDK, C, Java, MATLAB*

Game Developer Intern, *Panteon Game Technologies* — Ankara, Turkey
June 2015 – Oct. 2015

Worked on three different mobile game projects. One of them, *MoBu*, is published during the internship. Implemented endless gameplay mode for it.

Technologies Used: *C#, Git, Jenkins CI, Unity 3D*

SELECTED PAST PROJECTS

azimuth	A multithreaded, CPU based ray/path tracer.
hoppy	A simple 2D game written in C from scratch for aarch64 based Android devices.
Project Vikings	A 3D racing game developed as a course project. Implemented AI behaviour and car mechanics.
Thinkies	A simple casual game made during Global Game Jam 2015.

Technical Skills

Programming Languages	C, C++14, C#, MATLAB, Python, x86 Assembly
Graphics APIs	OpenGL (3.x), OpenGL ES, Direct3D (10 & 11)
Shading Languages	GLSL, ShaderLab, HLSL
Graphics Debuggers	PIX for Windows, Intel GPA, NVIDIA NSight, RenderDoc
Parallel Computing	CUDA
Game Engines	Unity3D, Cocos2d
Selected APIs/Libs	PyTorch, Win32 API, Eigen, FBX SDK, Intel SSE, OpenSL ES, pthreads
Scripting	Bash, Batch
Compilers	MSVC++, gcc/g++, clang
IDEs/Text Editors	Notepad++, Vim, Microsoft Visual Studio, Android Studio, Eclipse
Version Control	Git, Plastic SCM
Other Programming Tools	GDB, Valgrind, dotPeek, make/CMake
3D Graphics Tools	Blender, MagicaVoxel, MeshLab
Raster Graphics Tools	Adobe Photoshop, GIMP
Operating Systems	MS-DOS 6.22, Microsoft Windows (95, 98, XP, Vista, 7, 8, 10), Various Linux Distributions (incl. CentOS, Kali, Lubuntu, Tails, Ubuntu)
Others	CSS, HTML, LaTeX, MongoDB, MySQL, PHP, Prolog, SQL

Languages

Turkish *(native)*

English *(fluent)*

German *(basics)*